Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KOJI SHIMODA, HARUHIKO AIKAWA,
MOTOHIDE YOSHIDA and TAKASHI HASEGAWA

Appeal No. 2002-0417
Application No. 08/973,213

ON BRIEF

Before KIMLIN, WALTZ and JEFFREY T. SMITH, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-7.

Claim 1 is illustrative:

1. A method of making an optical fiber product, said method comprising:

winding a coated optical fiber around a first winding member, said coated optical fiber comprising a glass fiber and a primary coating layer made of a UV-cured resin disposed around an outer periphery of said glass fiber, said glass fiber comprising a core having a predetermined refractive index and a cladding

disposed around an outer periphery of said core, said cladding having a refractive index lower than that of said core;

rewinding, after said winding, around a second winding member said coated optical fiber wound around said first winding member, said second winding member being different from said first winding member; and

holding, after said winding and before said rewinding, said coated optical fiber in an atmosphere with a mean temperature T (unit: °C, >0 °C) for a time greater than or equal to $30,000/T^2$(hr).

The examiner relies upon the following references as evidence of obviousness:

Gutek	4,824,875	Apr. 25, 1989
Field et al. (Field)	5,302,627	Apr. 12, 1994
Chu et al. (Chu)	5,498,642	Mar. 12, 1996
Roderburg (United Kingdom Patent Application)	2,142,280	Jan. 16, 1985

Appellants' claimed invention is directed to a method of making an optical fiber product comprising a glass fiber and a primary coating of a UV-cured resin layer. The method entails winding the coated optical fiber on a first winding member and rewinding the fiber on a second winding member. After winding the fiber on the first winding member, but before rewinding the fiber onto the second winding member, the fiber is held in an atmosphere having a mean temperature T greater than or equal to $30,000/T^2$(hr). According to appellants, they have "discovered and investigated a relationship between the temperature where the

coated optical fiber is held, the duration for which the coated optical fiber is held at that temperature, and the extent of delamination between the coating and the underlying element" (page 3 of principal brief, last paragraph). Appellants maintain that "the number of delaminations can be reduced significantly by holding the coated fiber for a period of time" in accordance with the recited relationship (id.).

Appealed claims 1-7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Field in view of Chu and Roderburg, and optionally in view of Gutek.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we are in agreement with appellants that the examiner has not established a prima facie case of obviousness for the claimed subject matter. Accordingly, we will not sustain the examiner's rejection.

There is no dispute that it was known in the art to wind and rewind an optical fiber bearing a coating of a UV-cured resin, and the examiner has established that it was known in the art that the UV curing could effect a superficial curing of the coated resin while the remaining underlying resin could undergo curing during storage. Consequently, the examiner concludes that "[o]ne of ordinary skill would easily recognize the economical

benefit of letting part of the process proceed during storage or transportation" (page 4 of Answer, second paragraph).

While we understand the examiner's logic regarding completing the curing process during storage or transportation, we agree with the arguments raised in appellants' Reply Brief that such curing during storage or transportation does not bring about the claimed process of holding the wound fiber at a particular temperature and time before rewinding the fiber. The examiner has not set forth any rationale which explains why it would have been obvious for one of ordinary skill in the art to control the holding time before performing the rewinding step disclosed by Roderburg. As a result, the examiner's conclusion of obviousness does not have the requisite factual support. While the examiner notes that at room temperature of 25°C the value of the recited relationship is 48 hours, and "one would immediately visualize storing/transporting fibers to take at least 48 hours" (page 5 of Answer, penultimate paragraph), the examiner has pointed to no teaching or suggestion of effecting a holding time of 48 hours before performing the rewinding step of Roderburg. The examiner's statement that "[l]etting a spool of fiber sit at room temperature for 48 hours is hardly a new invention" does not address the claimed requirement that the

sitting at room temperature for 48 hours must take place at a specific point in the claimed process, i.e., between the winding and rewinding steps (page 6 of Answer, penultimate paragraph).

In conclusion, based on the foregoing, it is our judgment that the examiner has not established a prima facie case of obviousness for the claimed invention. Accordingly, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN Administrative Patent Judge	)	
THOMAS A. WALTZ Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY T. SMITH Administrative Patent Judge	)	

ECK:clm

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